

Northern Maine Medical Center)
Aroostook County)
Fort Kent, Maine)
A-130-71-G-R)

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Northern Maine Medical Center (NMMC) of Fort Kent, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their healthcare facility.

B. Emission Equipment

NMMC is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	12.6	84	#6 at 2.0%	1
Boiler #2*	6.9	50	#2 at 0.5%	1
Boiler #3	6.9	50	#2 at 0.5%	1

*: this unit has been modified to burn #2 fuel oil rather than the previously licensed #6 at 2.0%.

Electrical Generation Equipment

<u>Equipment</u>	<u>Power Output (kW)</u>	<u>Firing Rate (gal/hr)</u>	<u>Stack #</u>
Generator #1	150	10.7	2

Incineration Equipment

Class Incinerator	IV-B
No. of Chambers	2
Type of Waste	Type 2 and 7
Max. Design Combustion Rate	80 lb/hr
Auxiliary Fuel Input:	
Primary Chamber (Btu/hr)	1,500,000 firing L.P. gas
Secondary Chamber (Btu/hr)	1,500,000 firing L.P. gas
Emission Control	Afterburner

C. Application Classification

The application for NMMC does not include the licensing of increased emissions or the installation of new equipment. Boiler #2 has been modified to burn #2 fuel oil at 0.5% sulfur. A decrease in emissions will occur due to the lower sulfur content fuel and decreased input capacity, however, annual emissions will remain the same due to the facility-wide fuel cap. Therefore, the license is considered to be a renewal of current licensed emission units.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #1, #2 and #3

NMMC operates boilers #1, #2 and #3 which each have a maximum design heat input capacity of 12.6, 6.9, and 6.9 MMBtu/hr, respectively. Boiler #1 fires #6 fuel oil with a maximum sulfur content not to exceed 2.0% by weight while boilers #2 and #3 each fire #2 fuel oil with a maximum sulfur content not to exceed 0.5% by weight. All three boilers were manufactured prior to 1989 and are therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

C. Diesel Generator

NMMC operates one back-up emergency diesel generator which fires diesel fuel with a maximum sulfur content not to exceed 0.5% by weight. The generator provides a maximum power output of 150 kW and shall be limited to 100 hours per year of operation.

D. Class IV-B Incinerator

BPT for the class IV-B incinerator shall consist of the following requirements:

Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800°F with a stack gas retention time, at or above 1800°F, of at least 1.0 second.

To ensure an efficient burn and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1800°F prior to commencing the burn cycle.

The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800°F for the duration of the burn cycle.

Installation and operation of a pyrometer equipped with a continuous chart recording device and a temperature test port at a location that will insure compliance with the temperature and retention time requirements.

A log will be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.

A maximum particulate emission rate of 0.10 gr/dscf corrected to 7% O₂ will be met.

Visible emissions from the incinerator shall not exceed 10% opacity based on a six (6) minute block average basis.

The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.

The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

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III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	50
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the total facility emissions, NMMC is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-130-71-G-R subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (16) Boilers #1, #2 and #3
- A. Boiler #1 shall be limited to the firing of #6 fuel oil with a maximum sulfur content not to exceed 2.0% by weight and boilers #2 and #3 shall be limited to the firing of #2 fuel oil with a maximum sulfur content not to exceed 0.5% by weight.
- B. NMMC shall be limited to an annual fuel use limit of 150,000 gallons of #6 and #2 fuel oil combined in boilers #1, #2 and #3 (based on a 12 month rolling total). A log shall be maintained documenting all fuel oil deliveries with receipt to include the sulfur content of each shipment.

C. Boilers #1, #2 and #3 shall each not exceed the following emission limits:

Equipment		PM/PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.20	-	-	-	-
	lb/hr	2.5	26.5	6.3	0.51	0.20
Boiler #2	lb/MMBtu	0.20	-	-	-	-
	lb/hr	1.4	3.5	2.1	0.28	0.07
Boiler #3	lb/MMBtu	0.20	-	-	-	-
	lb/hr	1.4	3.5	2.1	0.28	0.07

- D. Visible emissions from boilers #1, #2 and #3 shall not exceed 30% opacity on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.
- E. The minimum stack height for boilers #1, #2 and #3 shall be 54 feet Above Ground Level (AGL) representing 40% of the Good Engineering Practice (GEP).

(17) Diesel Generator

- A. The diesel generator shall each be limited to the firing of diesel fuel with a maximum sulfur content not to exceed 0.5% by weight with an annual fuel use limit of 1100 gallons (based on a 12 month rolling total). A log shall be kept documenting all diesel fuel deliveries with receipt to include the sulfur content of each shipment.
- B. The diesel generator shall each be limited to an annual operational limit of 100 hours (based on a 12 month rolling total). A log shall be maintained documenting the hours of operation for the diesel unit.
- C. The diesel generator shall each not exceed the following emission limits:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM/PM10	0.20	0.30
SO ₂	-	0.77
NO _x	-	6.6
CO	-	1.4
VOC	-	0.53

- D. Visible emissions from the diesel generator shall each not exceed 20% opacity on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.
- E. The minimum stack height for the emergency diesel generator shall be 54 feet Above Ground Level (AGL).

(18) Class IV-B Incinerator

- A. The class IV-B incinerator shall not exceed the maximum design combustion rate of 80 lb/hr. Auxiliary fuel input to the primary and secondary chamber shall not exceed 1,500,000 btu/hr each firing L.P. gas.
- B. The incinerator shall not exceed a particulate matter emission limit of 0.10 gr/dscf corrected to 7% O₂ without the contribution of the CO₂ from the auxiliary fuel. Therefore, based on the design feed rate and continuous operation of the class IV-B incinerator, emissions shall be limited to the following:

<u>Pollutant</u>	<u>gr/dscf</u>	<u>lb/hr</u>
PM/PM10	0.10	0.20
SO ₂	-	0.23
NO _x	-	0.46
CO	-	0.23
VOC	-	0.23

- C. The class IV-B incinerator shall be used for the disposal of types 2 and 7 (infectious) wastes and shall not be used for the disposal of any cytotoxic (antineoplastic) drugs, wastes, any wastes deemed hazardous by the Bureau of Remediation and Waste Management, or any radioactive wastes.
- D. Operating temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800°F with a stack gas retention time, at or above 1800°F, of at least 1.0 second.
- E. To ensure an efficient burn and to prevent odors and visible emissions, the secondary chamber shall be preheated, as specified by the manufacturer, until the pyrometer temperature measures a minimum of 1800°F prior to commencing the burn cycle.
- F. The temperature in the secondary chamber or refractory lined stack shall be maintained at or above 1800°F for the duration of the burn cycle.
- G. Installation and operation of a pyrometer equipped with a continuous chart recording device and a temperature test port at a location that will insure compliance with the temperature and retention time requirements.
- H. A log will be maintained recording the weight of the waste charged, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.
- I. Visible emissions from the incinerator shall not exceed 10% opacity based on a six (6) minute block average basis.
- J. The ash will be disposed of in accordance with the requirements of the Bureau of Remediation and Waste Management.
- K. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

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- L. The amount of waste combusted in the incinerator shall not exceed 1000 lb/week corresponding to an annual charging limit of 26 tons per year (based on a 12 month rolling total).
- (19) Total Allowable Annual Emissions from the facility shall not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	2.5
PM ₁₀	2.5
SO ₂	23.9
NO _x	6.5
CO	0.80
VOC	0.40

- (20) The term of this license shall be five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 1999.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: June 1, 1999

Date of application acceptance: June 1, 1999

Date filed with the Board of Environmental Protection: _____

This Order prepared by Stephanie L. Carver, Bureau of Air Quality